

What is claimed is:

1. An image processing method comprising the steps of:

5 decoding an image by decomposing the image into multiple color components;

drawing a histogram by calculating the density value frequencies of the image data on the  
respective color components which have been obtained as a result of decoding;

10 calculating a high-density-side peak value and a low-density-side peak value from said  
histogram for judging their hierarchical relationship with regard to each of the respective color  
components;

counting the number of colors selected from among said multiple color components  
whose high-density-side peak values are higher than their low-density-side peak values; and

15 determining an image which is to become a binarization object based on the number of  
color components counted.

2. The image processing method according to claim 1, wherein

the number of colors selected from among said multiple color components whose high-  
density-side peak values are higher and the number of colors selected from among said multiple  
color components whose low-density-side peak values are higher are compared, and

20 the outnumbering color components are selected as images which are to become  
binarization objects.

3. The image processing method according to claims 1 or 2, wherein

the respective pixels of the images of the respective color components which have been selected as binarization objects and preliminarily determined threshold levels are compared, and pixels of the respective color components which exceed said threshold levels are judged to be either black or white, whereas the other pixels are judged to be the other.

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4. The image processing method according to claim 1, wherein  
when the number of color components whose low-density-side peak values are higher exceeds the number of color components whose high-density-side peak values are higher, said color components whose low-density-side peak values are higher are selected as binarization object images, and the white pixels and black pixels of said images are permuted during a binarization routine.

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5. An image processing device comprising:

in an image processing device which processes image data which have been decoded after having been decomposed into multiple color components;  
a histogram generation mechanism which generates a density value histogram with regard to each color component by tabulating inputted pixels in density value-specific fashions;  
a peak detection mechanism which detects a low-density-side peak value and a high-density peak-side value on said density histogram;

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a color component selection unit which compares the hierarchical relationship between said detected low-density-side peak value and high-density peak-side value with regard to each color component and which executes a binarization routine based on the comparison results; and  
a binarization unit which binarizes the color component image which has been selected

by said color component selection unit.

6. The image processing device according to claim 5 further comprises:

a threshold value designation mechanism which designates a binarization threshold value  
5 based on the low-density-side and high-density-side peak values which have been detected by  
said peak detection unit is additionally configured.

7. The image processing device according to claims 5 or 6 wherein:

said color component selection unit counts the number of color components whose low-density-side peak values are higher and the number of color components whose high-density-side peak values are higher, and

10 said binarization unit judges that, when the number of color components whose high-density-side peak values are higher is larger, the pixels which exceed said threshold value with regard to said color components are either white or black, whereas when the number of color components whose low-density-side peak values are higher is larger, the pixels which exceed said threshold value with regard to said color components are the other.  
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